

Title (en)
Apparatus for heat treatment of pervious webs

Title (de)
Vorrichtung zum Wärmebehandeln von durchlässigen Warenbahnen

Title (fr)
Dispositif pour le traitement par chaleur de bandes continues perméables

Publication
EP 0953813 A2 19991103 (DE)

Application
EP 99108313 A 19990422

Priority
DE 19819340 A 19980430

Abstract (en)
The apparatus for heat treating a permeable web has a mesh roller with two spaced coaxial mesh roller mantles (5, 15'), at least in the zone covered by the web round it. A width adjustment system (16-18) is between the outer (5) and inner (15) mesh roller mantles, with adjustment through a spindle (21) on the mesh roller (5) axis. The inner mesh roller mantle (15) has a permeable zone (15') only for the minimum roller working width. The width adjustment system has radially aligned bases (16, 17) in a ring shape between the mantles (5, 15), with arm links (18) to the axial bearing mounting of the roller (5). The ring-shaped bases (16, 17) extend only over a ring segment which is covered by the web material. The axial spindle (21) is surrounded by a hollow shaft (20), which carries an external ring bearing shell (19) with an axial sliding movement for the arms (18) and the bases (16, 17) of the width adjustment mechanism. The hollow shaft (20) has a longitudinal slit for the width adjustment system, with a drive lug (22) which meshes with the inner spindle (21) at one end and is bonded to the bearing shell (19) at the other end, to be moved along the slit. The inner coaxial and permeable mesh roller mantle (15) is bonded to the inner cladding (8) so that it is keyed against rotation for the outer mesh roller mantle (5) to rotate round it. The inner permeable section (15) of the mesh roller mantle is a circular segment, and the remainder of the circle is formed by the remaining circular segment of the inner cladding (8). The inner mesh roller mantle (15) has an axial slit at the movement zone of the arms (18) where they can pass through, and particularly at the air permeable segment. The ring-shaped bases (16, 17) are between the mesh roller mantles (15, 5) at both ends of the mesh roller (5), and keep the width adjustment system central. The ring base units (16, 17), with an axial setting, are held through three arms (18) and preferably two arms. The arms (18) are aligned radially over the inner mesh roller mantle (15), between the two mantles (15, 5), and also axially outwards to the end sides of the roller (5). The cross-section of the free air passage zone of the inner mesh roller mantle (15) is smaller than that of the outer roller mesh mantle (5). A further permeable zone (15) is axially outside the air permeable zone (15') of the inner roller mesh mantle (15), with a much narrower free cross-section than the center zone (15').

Abstract (de)
Es ist eine Vorrichtung zum Wärmebehandeln von durchlässigen Warenbahnen mit einem Gehäuse bekannt, in dem wenigstens eine Siebwalze an- und dieser eine Pumpeneinrichtung stirnseitig zugeordnet ist, die ein dampf- und/oder gasförmiges Behandlungsmedium aus der Siebwalze absaugt, wobei deren Durchströmbereich, also die Arbeitsbreite der Siebwalze, durch eine Breitenverstelleinrichtung an der Siebwalze bestimmbar. Eine solche Siebwalze ist erfindungsgemäß verbessert, wenn a) sie zumindest im von der Warenbahn bedeckten Bereich zwei koaxial angeordnete durchlässige Siebwalzenmäntel (5,15) aufweist, die mit einem Abstand voneinander angeordnet sind, b) zwischen dem äußeren (5) und dem inneren (15) Siebwalzenmantel eine Breitenverstelleinrichtung (16,17,18) vorgesehen ist, die, c) über eine Spindel (21) in der Achse der Siebwalze (5) verstellbar ist, und wenn, d) der innere Siebwalzenmantel (15) nur in dem Bereich (15') durchlässig ausgebildet ist, der der minimalen Arbeitsbreite der Walze entspricht. Eine solche Konstruktion ist für große Arbeitsbreitenunterschiede und auch für kleinere Siebwalzendurchmesser geeignet, ohne daß es zu ungleichmäßig Behandlungen über die Arbeitsbreite führt. <IMAGE>

IPC 1-7
F26B 13/16

IPC 8 full level
D06B 5/08 (2006.01); **F26B 13/16** (2006.01)

CPC (source: EP US)
D06B 5/08 (2013.01 - EP US); **D06C 7/00** (2013.01 - EP US); **F26B 13/16** (2013.01 - EP US)

Citation (applicant)
• DE 1900496 A1 19700813 - VEPA AG
• DE 1926742 A1 19701126 - VEPA AG

Cited by
CN111186211A

Designated contracting state (EPC)
CH DE FR GB IT LI

DOCDB simple family (publication)
EP 0953813 A2 19991103; **EP 0953813 A3 19991201**; **EP 0953813 B1 20030409**; DE 19819340 A1 19991104; DE 59904915 D1 20030515; US 6151797 A 20001128

DOCDB simple family (application)
EP 99108313 A 19990422; DE 19819340 A 19980430; DE 59904915 T 19990422; US 30244199 A 19990430